



SPEC[®] CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECfp[®]_rate2006 = 363

Huawei CH220 V3(Intel Xeon E5-2623 v4)

SPECfp_rate_base2006 = 357

CPU2006 license: 3175

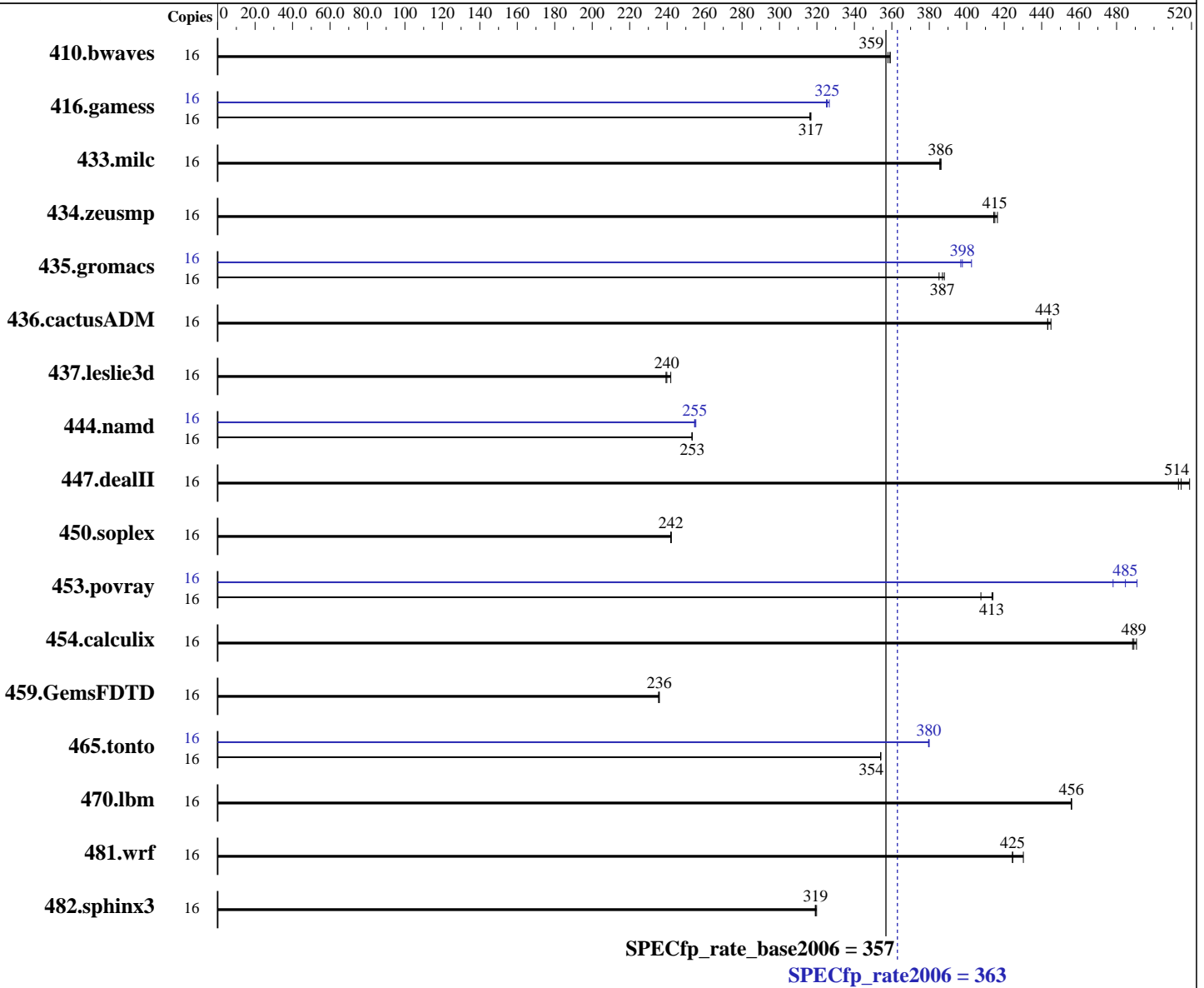
Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2016

Hardware Availability: Mar-2016

Software Availability: Dec-2015



Hardware

CPU Name: Intel Xeon E5-2623 v4
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 12 SP1 3.12.49-11-default
 Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux;
 Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux
 Auto Parallel: No
 File System: ext4
 System State: Run level 3 (multi-user)

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = **363**

Huawei CH220 V3(Intel Xeon E5-2623 v4)

SPECfp_rate_base2006 = **357**

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2016

Hardware Availability: Mar-2016

Software Availability: Dec-2015

L3 Cache: 10 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (8 x 32 GB 2Rx4 PC4-2400T-R, running at 2133 MHz)
Disk Subsystem: 1 x 600 GB SAS,10000 RPM
Other Hardware: None

Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
410.bwaves	16	606	359	605	359	607	358	16	606	359	605	359	607	358		
416.gamess	16	991	316	989	317	989	317	16	963	325	964	325	959	327		
433.milc	16	381	386	380	386	381	386	16	381	386	380	386	381	386		
434.zeusmp	16	351	415	351	414	350	416	16	351	415	351	414	350	416		
435.gromacs	16	295	387	294	388	297	385	16	288	397	287	398	284	403		
436.cactusADM	16	431	443	430	445	431	443	16	431	443	430	445	431	443		
437.leslie3d	16	627	240	628	239	622	242	16	627	240	628	239	622	242		
444.namd	16	506	253	507	253	506	253	16	504	255	504	255	503	255		
447.dealII	16	356	514	353	519	357	513	16	356	514	353	519	357	513		
450.soplex	16	551	242	552	242	551	242	16	551	242	552	242	551	242		
453.povray	16	206	414	206	413	209	408	16	176	485	178	478	173	491		
454.calculix	16	270	489	270	489	269	491	16	270	489	270	489	269	491		
459.GemsFDTD	16	721	235	720	236	720	236	16	721	235	720	236	720	236		
465.tonto	16	445	354	445	354	445	354	16	415	380	415	380	414	380		
470.lbm	16	482	456	482	456	482	456	16	482	456	482	456	482	456		
481.wrf	16	421	424	421	425	415	430	16	421	424	421	425	415	430		
482.sphinx3	16	977	319	977	319	975	320	16	977	319	977	319	975	320		

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS configuration:
Set Power Efficiency Mode to Performance
Set Snoop Mode to ES mode
Set Patrol Scrub to Disable
Sysinfo program /spec16/config/sysinfo_rev6914
Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 363

Huawei CH220 V3(Intel Xeon E5-2623 v4)

SPECfp_rate_base2006 = 357

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2016

Hardware Availability: Mar-2016

Software Availability: Dec-2015

Platform Notes (Continued)

\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on linux-suse Sun Dec 4 04:02:30 2016

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: <http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

From /proc/cpuinfo

```
model name : Intel(R) Xeon(R) CPU E5-2623 v4 @ 2.60GHz
 2 "physical id"s (chips)
 16 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
  cpu cores : 4
  siblings  : 8
  physical 0: cores 0 1 2 3
  physical 1: cores 0 1 2 3
 cache size : 10240 KB
```

From /proc/meminfo

```
MemTotal:      264273188 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

From /etc/*release* /etc/*version*

```
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 1
# This file is deprecated and will be removed in a future service pack or release.
# Please check /etc/os-release for details about this release.
os-release:
NAME="SLES"
VERSION="12-SP1"
VERSION_ID="12.1"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP1"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp1"
```

uname -a:

```
Linux linux-suse 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015
(8d714a0) x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Dec 3 03:12

SPEC is set to: /spec16

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdal       ext4  551G  39G  511G   8% /
```

Additional information from dmidecode:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 363

Huawei CH220 V3(Intel Xeon E5-2623 v4)

SPECfp_rate_base2006 = 357

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Dec-2016
Hardware Availability: Mar-2016
Software Availability: Dec-2015

Platform Notes (Continued)

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Insyde Corp. 3.31 08/22/2016

Memory:

8x Micron 36ASF4G72PZ-2G3B1 32 GB 2 rank 2400 MHz, configured at 2133 MHz
8x NO DIMM NO DIMM

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec16/libs/32:/spec16/libs/64:/spec16/sh"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

Filesystem page cache cleared with:

echo 1> /proc/sys/vm/drop_caches

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64

416.gamess: -DSPEC_CPU_LP64

433.milc: -DSPEC_CPU_LP64

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 363

Huawei CH220 V3(Intel Xeon E5-2623 v4)

SPECfp_rate_base2006 = 357

CPU2006 license: 3175

Test date: Dec-2016

Test sponsor: Huawei

Hardware Availability: Mar-2016

Tested by: Huawei

Software Availability: Dec-2015

Base Portability Flags (Continued)

```

434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

```

Base Optimization Flags

C benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

C++ benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

Fortran benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

```

Benchmarks using both Fortran and C:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

Peak Compiler Invocation

C benchmarks:

```

icc -m64

```

C++ benchmarks:

```

icpc -m64

```

Fortran benchmarks:

```

ifort -m64

```

Benchmarks using both Fortran and C:

```

icc -m64 ifort -m64

```



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 363

Huawei CH220 V3(Intel Xeon E5-2623 v4)

SPECfp_rate_base2006 = 357

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2016

Hardware Availability: Mar-2016

Software Availability: Dec-2015

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -opt-mem-layout-trans=3(pass 2)
-prof-use(pass 2) -fno-alias -auto-ilp32

447.dealIII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -opt-mem-layout-trans=3(pass 2)
-prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4 -auto
-inline-calloc -opt-malloc-options=3

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 363

Huawei CH220 V3(Intel Xeon E5-2623 v4)

SPECfp_rate_base2006 = 357

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2016

Hardware Availability: Mar-2016

Software Availability: Dec-2015

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

435.gromacs: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -opt-mem-layout-trans=3(pass 2)
-prof-use(pass 2) -opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.

Report generated on Wed Dec 28 10:52:12 2016 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 27 December 2016.